

**SUPPLEMENTARY FIG. 3.** High magnification of select traumatic brain injury (TBI) markers in the olfactory bulb (OB) 4 days post-OBI (olfactory bulb impact). AQP4 staining in non-stellar astrocytes in the OB glomerular layer after TBI in OMP-GFP mouse,  $\beta$ -APP accumulates in the injured OB axons, which form swellings at their tips known as retraction bulbs, label-free leukocyte visualization at OBI site. AQP4, aquaporin 4; GFAP, glial fibrillary acidic protein; GFP, green fluorescent protein;  $\beta$ -APP, beta amyloid precursor protein.